

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 1

Item ID: D3391-025 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Aft Tube Assembly
 Start Date: 7/15/2015 Start Qty: 1.00 ***1*** Cust Item ID:
 Required Date: 7/15/2015 Req'd Qty: 1.00 ***1*** Customer:
 Reference:

Approvals: Process Plan: MCS Date: JUL 15 2015 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3391	I

100 0.00
100 MORI SEIKI CNC LATHE LARGE
 Mori Seiki Memo 0.02
 Mori Seiki CNC Lathe Large Turn as per Folio FA599 Rev: A & Dwg D3391 Rev: I
 ensure steady rest is turning true
 ****REMOVE STEADY REST AND MACHINIG MARKS****

110 0.00
110 QC2- Inspect parts off machine FAI/FAIB
 QC Memo 0.00
 Quality Control

2 Ø 15/07/28
mml
1 Ø 15/07/28
mml

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 3

Item ID: D3391-025

Accept

N900040100Setup Start ***NS1***

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Start Date: 7/15/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/15/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

QC8- Inspect parts - second check

0.00

140

QC

Memo

0.00

Quality Control

INSPECT INSIDE BORE

DAS
14
9-89

15/08/31

150

Skidtubes

0.00

150

Skidtubes

Memo

0.00

Skidtubes

1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803

15-9-1

160

BENDING MACHINE - SKIDTUBES

0.00

160

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

Form as per Dwg D3391 Using Bend Prog 3391025

15-9-1

ENSURE TUBE IS BENT ACCORDING TO NCR15-5397
DISPOSITION.

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 4

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Start Date: 7/15/2015 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 7/15/2015 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
StampDAS
18
9-09

170

QC5- Inspect part completeness to step on W/O

0.00

4.21

170

QC

Memo

0.00

Quality Control

1 0 BE15-0701

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 5

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QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
180	Skidtubes	0.00							
180									
Skidtubes	Memo	0.02							
Skidtubes	1-Open Aft cap pilot hole to .208" as per Dwg D3391								
	2-Drill float bag holes using DT8809 as per Dwg D3391(Holes marked "A" Only.								
	3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217 Wearplate Jig . *****Do Not Open To Finished Size*****								
	4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2 previously drilled aft wearplate holes.								
	5-Open wearplate holes to 0.297" and c'bore as per dwg D3391								
	6-Open up all float bag holes to 0.328" and c'sink as per Dwg D3391.								
	7-Deburr								
	8- Scribe batch # on fwd end								

15-9-8

15-9-8

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 6

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Start Date: 7/15/2015 Start Qty: 1.00

1

Cust Item ID:

Required Date: 7/15/2015 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start ***NR1***

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00

190

QC

Memo

0.00

Quality Control

① 15-08-08 PD

200

Chemical Conversion Coat per QSI005 4.1

0.00

200

HandFinish

Memo

0.01

Hand Finishing

15-9-9

210

QC7-Inspect Chemical Conversion Coat

0.00

210

QC

Memo

0.00

Quality Control

1 8 15-08-09DAS
18
9-09

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 7

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 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	Skidtubes	0.00							
220									
Skidtubes	Memo	0.01							
Skidtubes	1- Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: <u>131589</u> exp. date: <u>11-2-30</u> cure time 12hrs as per QSI0015								
	2- Grind crossbolts flush								
	3- Back drill using #9 drill								
	4- Touchup Magnabond								
	5- Deburr								
230	QC5- Inspect part completeness to step on W/O	0.00							
230									
QC	Memo	0.00							
Quality Control									

Handwritten: 15-9-9

Handwritten: 15-9-10

Handwritten: 150910 DAS
9
9-89

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 8

Item ID: D3391-025 Accept ***N900040100*** Setup Start ***NS1***
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Required Date: 7/15/2015 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
235	Pressure Wash per QSI005 4.3	0.00							
235									
HandFinish	Memo	0.01							
Hand Finishing	AND REALODINE AS PER PAR09-043								
240	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
240	<i>M 131545.</i>								
Powdercoat	Memo	0.00							
Powder Coating	START TIME: <i>3:40.</i>								
	OVEN TEMPERATURE: <i>320°</i>								
	FINISH TIME: <i>4:15.</i>								
250	QC3- Inspect Part Finish	0.00							
250									
QC	Memo	0.00							
Quality Control									

DAS
15
9-89

Work Order ID 134696

Wednesday, July 15, 2015 12:00:30 PM

134696

Page 10

Item ID: D3391-025 Accept ***N900040100*** Setup Start ***NS1***
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Required Date: 7/15/2015 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
290	QC21- Final Inspection - Work Order Release	0.00							
290									
QC	Memo	0.00							
Quality Control									

ML5 SEP 23 2015

Picklist Print

Wednesday, July 15, 2015 12:00:33 PM

Page 1

Work Order ID: 134696

134696

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/15/2015

Required Date: 7/15/2015

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP Rev B 06-02-07 ECN773 dwg rev. D EC
IPP Rev:C 06-03-28 Update Manuf. Instructions JLM
IPP rev D 07.03.20 revF dwg EC
IPP rev E 07.11.07 rev G dwg ecn 1053p EC verified by: DD
IPP Rev:F 07-11-13 ECN 1056 DD verified by: EC
IPP Rev:G 08-09-10 revH as per dwg DD verified by:EC IPP Rev:H
11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D4095-047		Manufactured	No			260	Each	11.0000	1	1			
-----------	--	--------------	----	--	--	-----	------	---------	---	---	--	--	--

D4095-047

Wearpad Aft

**

all 15/09/22

Location

Loc Qty

Loc Code

FP001

11

B134521

XL

116100

7

133502

4

D4095-049

Manufactured No

260

Each

33.0000

1

1

D4095-049

Wearpad Aft

**

all 15/09/22

Location

Loc Qty

Loc Code

FP001

33

126331

33

XL

D6014-090

Manufactured No

100

Each

27.0000

1

1

D6014-090

ALUMINUM EXTRUSION

**

Location

Loc Qty

Loc Code

LG003

27

79742

1

86063

26

+ manual 15/07/23

Picklist Print

Wednesday, July 15, 2015 12:00:33 PM

Page 2

Work Order ID: 134696

134696

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/15/2015

Required Date: 7/15/2015

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

230

Each

16.0000

4

4

D3670-4-200

Bushing

**

15-9-9

Location

Loc Qty

Loc Code

FG

10

87709

10

LG002

132777

6

6

4

D2646

Manufactured No

270

Each

62.0000

1

1

D2646

Aft Cap

**

15/09/22

Location

Loc Qty

Loc Code

FG

4

85848

2

90495

2

FP001

58

103306

1

114495

1

127924

6

128761

2

132325

16

132326

32

XL

Picklist Print

Wednesday, July 15, 2015 12:00:33 PM

Page 3

Work Order ID: 134696

134696

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/15/2015

Required Date: 7/15/2015

Start Qty: 1.00

Required Qty: 1.00

D3672-1

Manufactured No

270

Each

578.0000

2

2

D3672-1

Washer, Phenolic

all 13/04/22

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

138

113581

138

ST055

430

112218

72

120116

3

127322

355

x2

ALS4-1032-130

AELS4-1032-130 Purchased

No

260

Each

1,213.000

14

14

AI S4-1032-130

Rivnut

all 13/04/22

Location

Loc Qty

Loc Code

st549

1213

M132317

1213

11133077

x14

ALS4-1032-225

AELS8-1032-225 Purchased

No

270

Each

1,095.000

8

8

AI S4-1032-225

Rivnut

all 13/04/22

Location

Loc Qty

Loc Code

FG

120

M127028

120

FP001

484

M131582

484

st549

491

M131582

491

x8

Wednesday, July 15, 2015 12:00:33 PM

Shop Packet Print

Page 3

Picklist Print

Wednesday, July 15, 2015 12:00:33 PM

Page 4

Work Order ID: 134696

134696

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/15/2015

Required Date: 7/15/2015

Start Qty: 1.00

Required Qty: 1.00

AN3C4A

Purchased

No

270

Each

1,427.000

6

6

AN3C4A

Bolt

all 15/07/22

Location

Loc Qty

Loc Code

FG

20

1132930

122814

20

x6

FP001

907

M132551

907

ST350

500

M132317

500

AN3C5A

Purchased

No

270

Each

501.0000

4

4

AN3C5A

Bolt

all 15/07/22

Location

Loc Qty

Loc Code

FG

5

122800

5

1132930

x4

ST

56

121708

56

ST338a

440

M131803

40

M132640

400

Wednesday, July 15, 2015 12:00:33 PM

Shop Packet Print

Page 4

Picklist Print

Wednesday, July 15, 2015 12:00:33 PM

Page 5

Work Order ID: 134696

134696

Parent Item: D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 7/15/2015

Required Date: 7/15/2015

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0332R

Purchased

No

270

Each

4,223.000

10

10

NAS1149C0332R

WASHER

all is loaded

Location

Loc Qty

Loc Code

FP001

2140

m130325

2140

GA

257

m131618

257

ST271

1826

m129390

72

m132262

1754

x 10

DART AEROSPACE LTD		Work Order: 134696
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: I	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

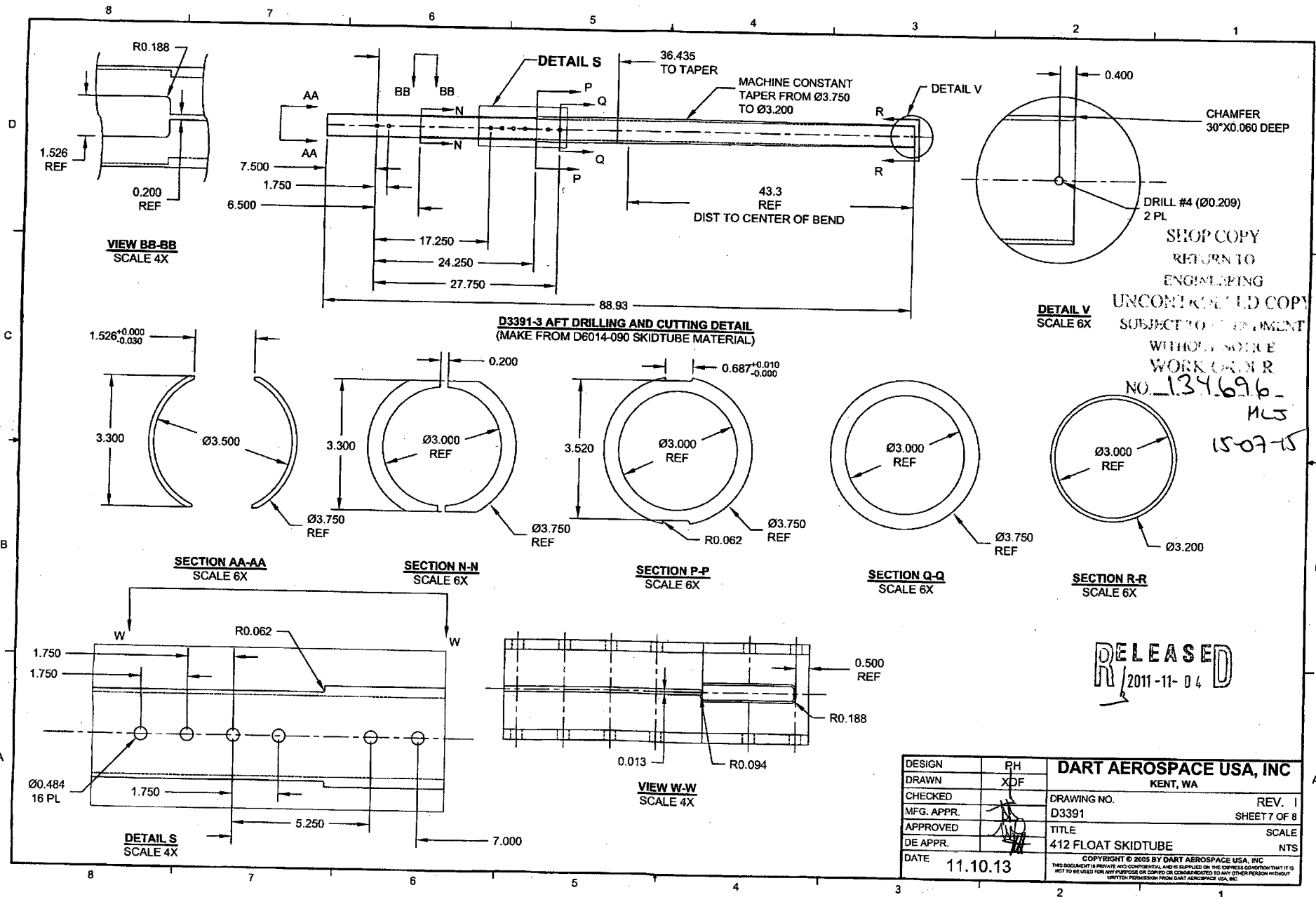
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.00	✓		tape	L6-11
3.500	+/-0.010	3.500	✓		vern	CNI-58
Ø3.200	+/-0.010	3.195	✓			
Ø3.750	+/-0.010	3.750	✓			
30° x 0.060 chamfer	+/-0.010	30° x 0.060	✓			
88.93	+/-0.030	88.93	✓		tape	L6-11

Measured by: mm ^{DAS}	Date: 15/07/25
Audited by: 9-89	Date: 15-07-30

HAAS Section						
1.526	+0.000/-0.030	1.514	✓		SLO8	Vern
7.500	+/-0.010	7.496	✓		SLO1	Tape
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.250	✓			
3.300	+/-0.010	3.304	✓		SLO8	
0.200	+/-0.010	.201	✓			
3.520	+/-0.010	3.522	✓			
0.687	+0.010/-0.000	.688	✓			
R0.062	+/-0.010	.062	✓			
Ø0.484	+0.005/-0.004	.485	✓			

Measured by: 20 9-89	Date: 15-08-27
Audited by: DAS	Date: 15/08/21

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	



CHAMFER
30°X0.060 DEEP

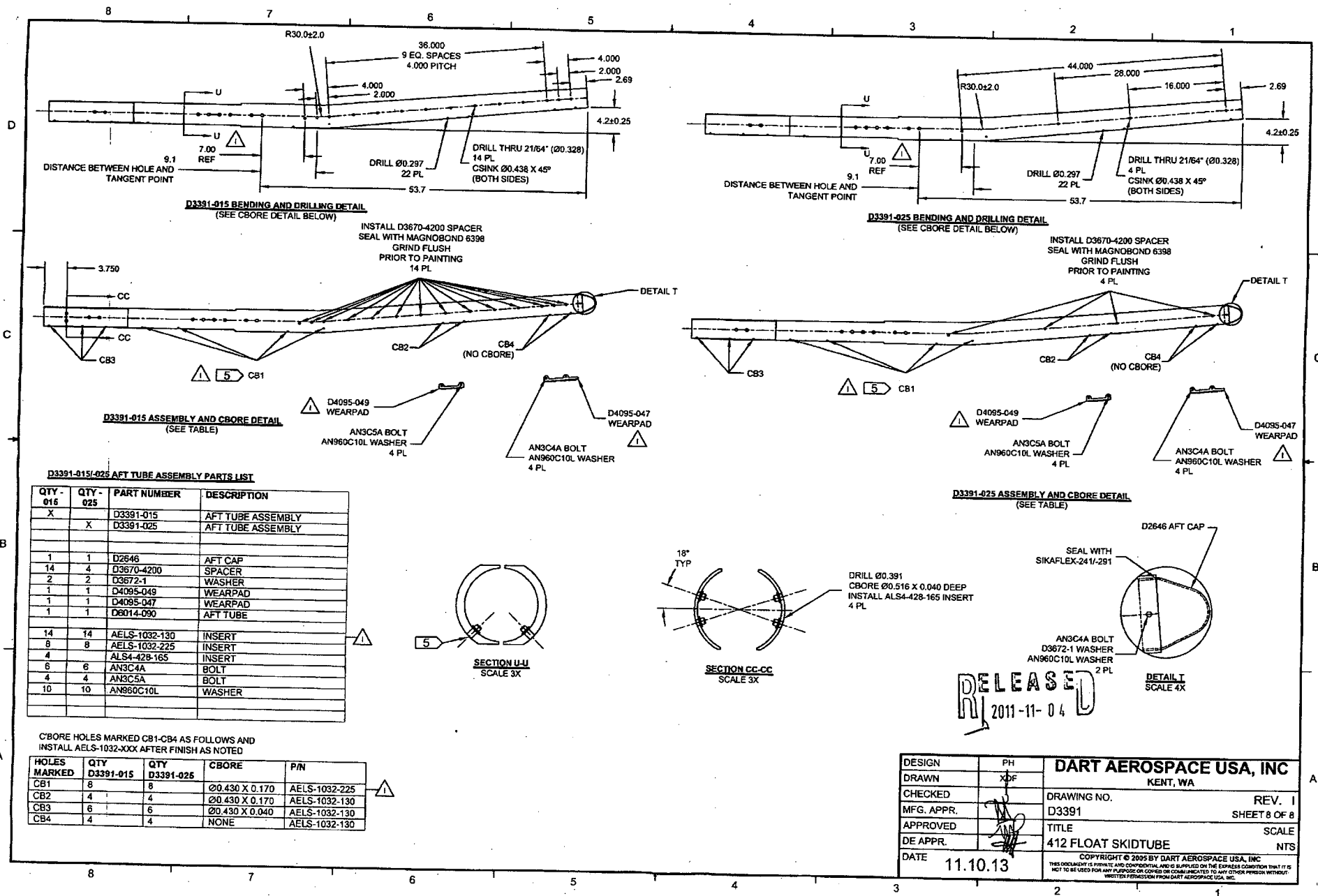
DRILL #4 (Ø0.209)
2 PL

SHOP COPY
RETURN TO
ENGINEERING

UNCONTROLLED COPY
SUBJECT TO REVISION
WITHOUT NOTICE
WORK ORDER
NO. 134696
MLJ
15-07-15

RELEASED
2011-11-04

DESIGN	RH	DART AEROSPACE USA, INC	
DRAWN	XDF	KENT, WA	
CHECKED		DRAWING NO.	REV. 1
MFG. APPR.		D3391	SHEET 7 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	11.10.13	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	
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DQA:

Date:



QA Closed:

Date:

WORK ORDER NON-CONFORMANCE / UPDATE

Work Order update only

Work Order: <u>134696</u>		DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No. <u>D3391-025</u>		Rework	☐	Skid-tube	☐	Cross tube	☒				
NCR No. <u>15-5397</u>		Scrap	☐	Machining	☐	Small Fab	☐				
		Use-as-is	☒	Thermoforming	☐	Finishing	☐				
		Suspected Unapproved	☐	Large Fab	☐	Composite	☐				
Date: <u>15-08-31</u>		Step #: <u>120</u>		QTY Effective: <u>1</u>		MRB (QSI042) Approval					
Description Work Order Deviation				Disposition							
Sections AA-AA, N-N, P-P are shifted 1/8" AA on one side only.				Acceptable. Critical section per SR is at end of tube. Bend tube with deviated deviated side on inside of bend to ensure no change in figure. <u>RED TAG w/ INSTRUCTIONS FOR BENDING</u>							
								Completed By			
								Lead hand / Supervisor			
								QC / QA Coordinator			
12 15/08/31 20 15-08-31 03 15/08/31 PD 1508-31											

Root Cause		FAULT CATEGORY	
Environment	☐	Pressure/Forced	☐
Design	☒	Bending	☐
Doc/Data	☐	Centre Not Concentric	☐
Equip/Tooling	☐	Cracks	☐
Handling/Pre	☐	Crimp/Kink/Ripple/Wave	☐
Material	☐	Cuffs	☐
Internal Transport	☐	Crushing	☐
Tribal Knowledge	☐	Heat Treat	☐
LOA	☐	Wave/Twist in Tube	☐
Substation	☐	Marks/Chatter	☐
Past Expiry Date	☐	OTHER:	☐
Misidentified	☐		